

Claims:

1. A method for adjusting an interface formed during operation between a specific light liquid phase and a specific heavier liquid phase to a wanted radial level in a centrifugal separator, which comprises a rotor which is rotatable around a rotation axis in a certain rotational direction, which rotor inside itself forms
- an inlet chamber, in which a conduit for the supply of a mixture of the two liquid phases, which are to be separated, opens
 - a separation chamber (5) communicating with the inlet chamber,
 - a outlet device for the discharge the specific light liquid phase separated during operation comprising an outlet passage (16), which is connected to a radial inner portion of the separation chamber (5), and
 - an outlet device for the discharge of the specific heavier liquid phase separated during operation comprising an outlet channel (18) formed in the rotor, which extends radially and has an inlet opening (19) at its radial outer end located at a certain radial level in a radial outer portion of the separation chamber (5) and at its radial inner end opens in a outlet chamber (17) surrounding the rotation axis, in which the specific heavier liquid phase forms a rotating liquid body having a radially inwardly turned free liquid surface, the radial position of which during operation takes a position at a level in balance with the pressure prevailing in the separation chamber (5) at the inlet opening, and in which a discharge device (21, 28) is arranged, which is non-rotatable with the rotor and has at least one internal discharge channel, which

extends radially and at its radial outer end has an inlet opening (23, 29) and at its radial inner end is connected to an outlet (27), at least a radial outer part of the discharge device (21, 28), in which the inlet opening (23, 29) is located, being movable in a way such that the inlet opening (23, 29) can be put in a different radii in the outlet chamber (17),

the centrifugal separator further comprising means for the supply of a pre-determined volume of the specific heavier liquid phase to the separation chamber (5), a first indicating means (26) for indicating that the separation chamber (5) during operation is filled up to a certain wanted level, means for keeping the separation chamber filled up to this radial level, and a second indicating means (27) for indicating the radial position of the free liquid surface in the outlet chamber (17) for the specific heavier liquid phase,

characterized in

that the separation chamber (5) is emptied of its contents and the inlet opening (23, 29) is brought to a radial inner position in the outlet chamber (17), after which such a large pre-determined volume of the specific heavier liquid phase is supplied to the separation chamber (5) that this volume during rotation of the rotor fills up the separation chamber radially inwardly to a radial level, which is located so much radially inside the inlet opening (19) of the outlet channel (18) that the volume portion of the supplied heavier liquid phase, which is located radially inside the inlet opening (19), at least is larger than the total volume of the volume of the outlet channel (18) and a portion of the volume of the outlet chamber (17), the mixture of the two liquid phases thereafter being supplied to the separation chamber (5) via the supply conduit (14, 34) and the inlet

chamber, whereby the separation chamber (5) gradually is filled up radially inwardly and an interface between the two liquid phases is formed, which is displaced radial outwardly, the displaced specific heavier liquid phase being pressed radial inwardly in the outlet channel (18) and further into the outlet chamber (17) where it forms a rotating liquid body having a radially inwardly free liquid surface, which is displaced radial inwardly while the separation chamber (5) is filled up, which takes place until the separation chamber (5) has been filled up to a wanted level, which is indicated by means of the first indicating means (26), after which the position of the radial outer part of the discharge device (21, 28) is changed so that the inlet opening (23, 29) is moved towards the free liquid surface in the outlet chamber (17) until the inlet opening (23, 29) reaches the liquid surface and the specific heavier liquid phase in the outlet chamber (17) being discharged through the inlet opening (23, 29) and the discharge channel, which is indicated by means of the second indicating means (27), the inlet opening (23, 29) thereafter being prevented from moving at least radially outwardly from its obtained position, which substantially corresponds to a wanted position of the interface whereas the inlet opening (23, 29) is pressed radially outwardly towards the obtained position by means of a force transferring element (35) acting on the outer moveable portion of the discharge device (21, 28), after which a normal operation is started, during which separation takes place and the separated specific light liquid phase and the separated specific heavier liquid phase are discharged through an outlet device each during maintaining the radial level of the free liquid surface in the outlet chamber (17) and consequently also the radial level of the interface.

2. A method according to claim 1, in which the centrifugal separator comprises a stack (11) of conical separation discs arranged in the

separation chamber, each one of which having a radial outer edge located at a radial distance from the inlet opening (19), characterized in that such a large pre-determined volume of the specific heavier liquid phase is supplied to the separation chamber (5) that this volume during rotation of the rotor fills up the separation chamber (5) radially inwardly to a radial level, which is located so much radially inside the inlet opening (19) of the outlet channel (18) that the volume portion of the supplied specific heavier liquid phase, which is located radially inside the inlet opening (19), at least is larger than the total volume of the outlet channel (18) and a portion of the volume of the outlet chamber (17) and the radial outermost third of the volume of the separation chamber (5), which is delimited radially inwardly by the radius of the outer edges of the separation discs and radially outwardly by the radius of the inlet opening (19) but less than the total volume of the volume of the outlet channel (18) and a portion of the volume of the outlet chamber (17) and the portion of the volume of the separation chamber (5), which is delimited radially inwardly by the radius of the outer edges of the separation discs and radially outwardly by the radius of the inlet opening (19).

3. A method according to claim 1 or 2, in which the movable outer portion of the discharge device (21, 28) is arranged turnable around a turning axis, which is arranged essentially parallel to and eccentric relative to the rotational axis, characterized in that the position of the radial outer part of the discharge device (21, 28) is changed and the inlet opening (23, 29) is displaced towards the free liquid surface by turning the radial outer part around the turning axis.

4. A method according to claim 3, characterized in that the radial outer part is turned around the turning axis in a rotational direction which is opposite to the rotational direction of the rotor.

5. A method according to claim 3 or 4, characterized in that the radial outer part has a projection (31), the inlet opening (23, 29) being prevented from moving radially outwardly from the radial position it has obtained when the second indicating means (27) has indicated that the specific heavier liquid phase is discharge through the inlet opening (23, 29) and the outlet channel by putting an adjustable stop (32) against the projection (31).
- 10 6. A method according to any of the claims 3, 4 or 5, characterized in that the radial outer part is turned in such a way that the inlet opening (23, 29) is displaced radially outwardly by means moment from the force transferring element (35) in the form of a resilient element.
- 15 7. A method according to the claims 6, characterized in that the radial outer part is influenced during operation by a moment from the specific heavier liquid phase present in the outlet chamber (17), which strive to turn this outer part in a way such that the inlet opening (23,29) is displaced radially inwardly, which moment increases by increasing portion
- 20 of the outer part being in contact with the specific heavier liquid phase into the outlet chamber (17) and displaces the inlet opening radially inwardly when this moment exceeds the moment from the force transferring element (35).